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EXAMINER				
DANG, HUNG Q				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/724,913

Applicant(s)

KINOSHITA ET AL.

Examiner

Hung Q. Dang

Art Unit

2621

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 15 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 07/11/2008 have been fully considered but they are not persuasive.

At pages 6, Applicant argues Bohrer teaches retrieving the data for plurality of files instead of data for a single file. In response, the Examiner respectfully disagrees. Although Bohrer discloses data access to serve plurality of file requests from different clients, it is also applied to the case of a single file if more than one client request the same file at the same time. Or even that is not the case, then a situation where there is only one client requesting only one file is still possible. Therefore, the teachings of Bohrer becomes relating to accessing one single file.

At pages 5-7, Applicant argues Bohrer is indifferent to chronological sequence of data blocks, teaches away from that, or the apparatus disclosed by Bohrer would not seek out the chronological sequence of the data blocks in the file. In response, the Examiner respectfully disagrees. In [0035] with reference to Fig. 3, Bohrer recites an access order which starts from data block A, then data block X, then data block B. Note that the accesses are not performed in parallel but sequentially. Specifically, data block X is accessed before data block B got accessed because data block B is not needed until access to data block X is completed; thus, saving time to travel the heads around. It is noticed that, in the case of requests for the same file, those data blocks would belong to a single file. Further, in [0035], Bohrer cites, "...because the server does not need the data from track B until T10, the system may prioritize the retrieval of data from

track X over the retrieval of data from track B based on the current position of ...” The cited passage implies that the data are read based on order of demands. For example, should the chronological sequence of the data blocks A, B, and C be maintained, then A, B, and C must be needed and accessed in that order. Because Bohrer discloses the access sequence of data blocks is based on when the data block is demanded, apparently it would maintain that chronological sequence. For that reason, the data access absolutely can be performed in chronological sequence required during reproduction of video contents.

At page 6, Applicant argues Bohrer are silent regarding data blocks that are before the current data block. In response, the Examiner respectfully disagrees. Again, as described above, Bohrer describes an access order starting from data block A, then data block X, then data block B. Assume the current time to be the time when data block X is being accessed. At this time the data block X is the current data block while data block A is sequentially before the current data block X and data block B is sequentially after the current data block X.

For ongoing reasons, the claims stand rejected as previously presented.

Information Disclosure Statement

The information disclosure statement filed 07/11/2008 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US Patent 7,003,711), Bohrer et al. (US 2003/0004948), and Dobbek et al. (US Patent 6,219,198).

Regarding claim 6, Noda et al. disclose a content reproducing apparatus for reading and reproducing a digital content that requires sequential reproduction (Fig. 6; column 4, lines 29-31; column 11, lines 42-50) and is recorded in a disk-shaped recording medium (Fig. 1; Fig. 4), comprising: head position estimating means for estimating a present position of a head with respect to the recording medium for reading a single file of the digital content (column 11, lines 52-54); data position calculating means for calculating a position of a data block for a digital content to be read next, and positions of other data blocks existing near the data block (column 11, lines 52-54; column 12, lines 22-37); and moving destination determining means for determining a data block at which the time required to move the head is the shortest, as a data block to be read next, based on the present position of the head, which has been estimated by the head position estimating means, and the positions of the respective data blocks, which have been calculated by the data position calculating means (column 11, lines 52-58); and wherein the moving destination determining means determines, based on a

rotation latency necessary for the head to move on a track having predetermined data existing thereon and then for the recording medium to rotate to thereby cause the data to reach the position of the head, a time required to move the head to the chronological sequential position of the corresponding data block (column 9, lines 40-45; column 11, lines 55-58).

However, Noda et al. do not disclose the disk-shaped recording medium in a hard disk drive; sequential reading of data block; data position calculating means for calculating a position of a data block for a digital content to be read next in chronological sequence in the single file, and chronological sequential positions of other data blocks existing sequentially before and sequentially after the data block in the single file; and sequential positions of the respective data blocks; the head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the magnetic head.

Bohrer et al. disclose a disk-shaped recording medium in a hard disk drive ([0032]); sequential reading of data block ([0035]; Fig. 3; also see "Response to Arguments" above); data position calculating means for calculating a position of a data block for a digital content to be read next in chronological sequence in the single file, and chronological sequential positions of other data blocks existing sequentially before and sequentially after the data block (Fig.3; [0035]; also see "Response to Arguments" above); and chronological sequential positions of the respective data blocks (Fig.3; [0035]; also see "Response to Arguments" above).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the hard disk drive and the data position calculating means disclosed by Bohrer et al. into the apparatus disclosed by Noda et al. because, according to Bohrer et al., the incorporated feature would help in minimizing disk head movement and heat dissipation and conserve energy ([0035]) and also, the hard disk drive can provide large capacity of storage with small access time.

However, the proposed combination of Noda et al. and Bohrer et al. does not disclose the head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the magnetic head.

Dobbek et al. disclose a head position estimating means measures a time taken to execute a command for reading the data block and reflects the result of measurement on estimation of the positions of the magnetic head (column 11, lines 34-43).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the head position estimating means disclosed by Dobbek et al. into the apparatus disclosed by Noda et al. and Bohrer et al. because, according to Dobbek et al., it would improve accuracy (column 3, lines 5-8).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US Patent 7,003,711), Bohrer et al. (US 2003/0004948), Jun et al. (US 2002/0178453), and Dobbek et al. (US Patent 6,219,198).

Regarding claim 15, Noda et al. disclose a method of controlling a personal video recorder for reading and reproducing a digital video content (column 5, lines 39-45; Fig. 6; column 4, lines 29-31; column 11, lines 42-50) recorded in a disk-shaped recording medium (Fig. 1; Fig. 4), comprising: estimating the present position with respect to the recording medium, of a head for reading the digital video content (column 5, lines 39-4; column 11, lines 52-54); calculating a position of a data block for the digital video content to be read next, and positions of other data blocks existing near the data block (column 5, lines 39-4; column 11, lines 52-54; column 12, lines 22-37); calculating a time required to move the head, based on the estimated present position of head and the positions of the respective data blocks (column 11, lines 52-58; column 9, lines 40-45).

However, Noda et al. do not disclose the disk-shaped recording medium in a hard disk drive; calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block and reading a data block at which the calculated time required to move the head is the shortest; and a time taken to execute a command for reading the digital video content is measured, and the result of measurement is reflected on estimation of the position of the head.

Bohrer et al. disclose the disk-shaped recording medium in a hard disk drive ([0032]); calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block ([0035]) and

reading a data block at which the calculated time required to move the head is the shortest ([0034]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of calculating the positions of data and reading a data block at which the calculated time required to move the head is the shortest and the hard disk drive disclosed by Bohrer et al. into the method disclosed by Noda et al. because, according to Noda et al., the incorporated feature would help in minimizing disk head movement and heat dissipation and conserve energy ([0035]) and a hard disk drive also can provide large capacity of storage with small access time.

However, the proposed combination of Noda et al. and Bohrer et al. does not disclose the data access for rewind and fast operations, respectively, for displaying the digital video content on the personal video recorder; and a time taken to execute a command for reading the digital video content is measured, and the result of measurement is reflected on estimation of the position of the head.

Jun et al. disclose rewind and fast operations, respectively, for displaying the digital video content on the personal video recorder ([0054]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate to implement the rewind and fast operations disclosed by Jun et al. into the method disclosed by Noda et al. and Bohrer et al. to enhance the user interface of the method.

However, the proposed combination of Noda et al., Bohrer et al., and Jun et al. does not disclose at the step for estimating the position of the head, a time taken to

execute a command for reading the digital video content is measured, and the result of measurement is reflected on estimation of the position of the head.

Dobbek et al. disclose when estimating the position of the head, a time taken to execute a command for reading the digital video content is measured, and the result of measurement is reflected on estimation of the position of the head (column 11, lines 34-43).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the head position estimating means disclosed by Dobbek et al. into the apparatus disclosed by Noda et al., Bohrer et al., and Jun et al. because, according to Dobbek et al., it would improve accuracy (column 3, lines 5-8).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. (US Patent 7,003,711) and Bohrer et al. (US 2003/0004948) and Jun et al. (US 2002/0178453).

Regarding claim 17, Noda et al. disclose a computer-readable medium encoded with a software program for controlling a computer and performing control for reading and reproducing a digital video content recorded in a disk-shaped recording medium (Fig. 1; Fig. 4), for allowing the computer to execute the following processes (column 5, lines 39-45; Fig. 6; column 4, lines 29-31; column 11, lines 42-50): a process for estimating the present position with respect to the recording medium, of a head for reading a single file of the digital video content (column 5, lines 39-4; column 11, lines 52-54; also see "Response to Arguments" above); a process for calculating chronological sequential positions of a data block for the digital video content to be read

next in the single file, and positions of other data blocks existing near the data block in the single file (column 5, lines 39-4; column 11, lines 52-54; column 12, lines 22-37; also see "Response to Arguments" above); a process for calculating a time required to move the head, based on the estimated present position of head and the positions of the respective data blocks in the single file (column 11, lines 52-58; column 9, lines 40-45).

However, Noda et al. do not disclose the disk-shaped recording medium in a hard disk drive; calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block and reading a data block at which the calculated time required to move the head is the shortest.

Bohrer et al. disclose the disk-shaped recording medium in a hard disk drive ([0032]); calculating a position of a data block for the digital content to be read next, and positions of other data blocks existing before and after the data block ([0035]) and reading a data block at which the calculated time required to move the head is the shortest ([0034]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the steps of calculating the positions of data and reading a data block at which the calculated time required to move the head is the shortest and the hard disk drive disclosed by Bohrer et al. into the method disclosed by Noda et al. because, according to Noda et al., the incorporated feature would help in minimizing

disk head movement and heat dissipation and conserve energy ([0035]) and a hard disk drive also can provide large capacity of storage with small access time.

However, the proposed combination of Noda et al. and Bohrer et al. does not disclose the data access for rewind and fast operations, respectively, for displaying the digital video content on the personal video recorder.

Jun et al. disclose rewind and fast operations, respectively, for displaying the digital video content on the personal video recorder ([0054]).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate to implement the rewind and fast operations disclosed by Jun et al. into the method disclosed by Noda et al. and Bohrer et al. to enhance the user interface of the method.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621